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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/927,966	08/10/2001	Gary E. Harman	19603/3461 (CRF D-2659A)	6010

7590 03/12/2004

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EXAMINER	
MARX, IRENE	

ART UNIT	PAPER NUMBER
1651	

DATE MAILED: 03/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/927,966	HARMAN, GARY E.	
	Examiner	Art Unit	
	Irene Marx	1651	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 November 2003*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,20 and 21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,20 and 21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ ~~Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)~~ Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

The amendment filed 11/12/03 is acknowledged. Claims 1-3 and 20-21 are being considered on the merits.

The information disclosure statement (IDS) submitted on 12/8/03 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2 and 20-21 are/remain rejected under 35 U.S.C. 102(b) as being anticipated by McCabe *et al.*.

The claims are drawn to a process of promoting plant deep root development by applying *Trichoderma* or *T. harzanium* to a plant or a plant seed.

The cited reference discloses applying *Trichoderma harzanium* to a plant or a plant seed (See, e.g., Examples. Even though the McCabe *et al.* reference does not specifically address the promotion of plant deep root development, the inherent effect of the application of *Trichoderma* or *T. harzanium* to a plant or a plant seed is the promotion of plant deep root development, since the same material, i.e., plant or a plant seed, is subjected to substantially the same microorganism, i.e. *Trichoderma* or *T. harzanium* in the process of the reference as in the claimed invention.

Response to Arguments

Applicant's arguments have been fully considered but they are not deemed to be persuasive.

In response to Applicant's argument that McCabe does not appreciate that "promoting deep rooting in plants" is a use for *T. harzanium*, a claim is anticipated if each element of the claim is found, either expressly described or under principles of inherency, in a single prior art reference, or that the claimed invention was previously known or embodied in a single prior art

device or practice. Moreover, claims 1 and 20-21 are directed to *Trichoderma.* This argument is not relevant except to claim 2.

Moreover, while discovery of the biological mechanism behind the administration of a known bioactive compound is clearly publishable in a peer-review journal, the criteria for patenting claims are distinct from publication criteria. For example, if the active step of the method is the same and the subject is the same, then the claimed method can be anticipated or made obvious by the prior art, even if the prior art does not recognize or appreciate this mechanism as long as the compound administered, dosage, mode of administration, subject, etc. are the same as in the method disclosed in the prior art.

If this were not so, one patent might issue with a one step claim of administering the a compound to a subject in order to empirically treat a specific disease which is result of a contemporaneously unknown, disordered mechanism or pathway; and, then upon later discovery of the mechanism of the disorder, another patent could issue with a one step claim directed to the administration of the same compound to the same subject in order to modulate the specifically disordered mechanism or pathway. This would lead to multiple patents with essentially the same invention being patented, merely being couched in different words.

In re Cruciferous Sprout Litigation, Brassica_v_Sunrise., 64 USPQ2d 1202 (CA FC 2002), the Federal Circuit upheld a decision that patents owned by Johns Hopkins University and licensed to Brassica Protection Products, Inc. are invalid for anticipation by the prior art. The patents are for methods of growing and eating certain sprouts to reduce the level of carcinogens in animals, thereby reducing the risk of developing cancer. Prior art references disclose growing and eating those specific sprouts. The Federal Circuit cited authority for the rule that, "a prior art reference may anticipate when the claim limitations not expressly found in that reference are nonetheless inherent in it." The court said, "While Brassica may have recognized something quite interesting about those sprouts, it simply has not invented anything new."

Therefore the rejection is deemed proper and it is adhered to.

Claims 1-3 and 20-21 are/remain rejected under 35 U.S.C. 102(b) as being anticipated by Harman *et al.*.

The claims are drawn to a process of promoting plant deep root development by applying *Trichoderma, T. harzanium* or *T. harzanium T-22,* to a plant or a plant seed.
The cited reference discloses applying *Trichoderma harzanium* T-22, designated therein as 1295-22, to a plant or a plant seed (See, e.g., Table 2; Specification, page 5, lines 30 et seq.). Even though the Harman *et al.* reference does not specifically address the promotion of plant deep root development, the inherent effect of the application of *T. harzanium* T-22 plant or a plant seed is the promotion of plant deep root development, since the same material, i.e., plant or a plant seed, is subjected to the same microorganism, i.e. *T. harzanium* T-22, in the process of the reference as in the claimed invention (See, e.g., col. 26, lines 47-55).

Response to Arguments

Applicant's arguments have been fully considered but they are not deemed to be persuasive.

Applicant argues that Harman does not meet the standards for inherent anticipation, because the reference applies the *Trichoderma* in an amount and a manner to control soil borne pathogen on the seed being protected (col. 5, lines 56-58). Whether or not Harman provides data regarding promotion of deep root development is irrelevant to the rejection made because applicant has not demonstrated that the preparation applied by Harman in the process disclosed is incapable of meeting the claim proviso of being provided under conditions effective to achieve deeper roots in the soil than in an untreated plant. It is noted that only a miniscule improvement is required to meet a claim which is directed to a method of "promoting" and wherein the claim designated requirement is for "deeper roots", without an indication of the extent of the effect.

Since precisely the same microorganism, i.e., *T. harzanium* T-22 is applied to the seed or plant, it is submitted that the effect on the treated plant or the plant grown from a treated seed is inherently the same, particularly in the absence of objective evidence to the contrary.

As noted *supra,* while discovery of the biological mechanism behind the administration of a known bioactive compound is clearly publishable in a peer-review journal, the criteria for patenting claims are distinct from publication criteria. For example, if the active step of the method is the same and the subject is the same, then the claimed method can be anticipated or made obvious by the prior art, even if the prior art does not recognize or appreciate this mechanism as long as the compound administered, dosage, mode of administration, subject, etc.

are the same as in the method disclosed in the prior art. The functional language recited is not sufficient to indicate a difference in dosage.

If this were not so, one patent might issue with a one step claim of administering the a compound to a subject in order to empirically treat a specific disease which is result of a contemporaneously unknown, disordered mechanism or pathway; and, then upon later discovery of the mechanism of the disorder, another patent could issue with a one step claim directed to the administration of the same compound to the same subject in order to modulate the specifically disordered mechanism or pathway. This would lead to multiple patents with essentially the same invention being patented, merely being couched in different words.

In re Cruciferous Sprout Litigation, Brassica_v_Sunrise., 64 USPQ2d 1202 (CA FC 2002), the Federal Circuit upheld a decision that patents owned by Johns Hopkins University and licensed to Brassica Protection Products, Inc. are invalid for anticipation by the prior art. The patents are for methods of growing and eating certain sprouts to reduce the level of carcinogens in animals, thereby reducing the risk of developing cancer. Prior art references disclose growing and eating those specific sprouts. The Federal Circuit cited authority for the rule that, "a prior art reference may anticipate when the claim limitations not expressly found in that reference are nonetheless inherent in it." The court said, "While Brassica may have recognized something quite interesting about those sprouts, it simply has not invented anything new."

Therefore the rejection is deemed proper and it is adhered to.

No claim is allowed.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Irene Marx whose telephone number is (571) 272-0919. The examiner can normally be reached on M-F (6:30-3:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Wityshyn can be reached on (571) 272-0926. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Irene Marx
Primary Examiner
Art Unit 1651